

### Abstract

A piston ring assembly includes a piston, and at least one piston ring positioned within a piston groove. Stabilization and support of the piston is provided by a support arrangement, including at least one support member positioned radially between a back wall of the ring groove and the piston ring. The support arrangement desirably acts to accommodate transverse loads exerted upon the piston during normal operation, and can optionally be configured for enhanced sealing of gasses. Improved engine output and efficiency are achieved